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UNITED STATES DEPARTMENT OF AGRICULTURE
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BARBERRY ERADICATION

NATURE OF THE PEST

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Stem rust is caused by a fungus which lives alternately on certain species of barberry, on grain, and on closely related grasses. There are more than 200 races of the stem rust fungus, which vary in their ability to attack different grains. From time to time hybridization on barberry gives rise to new races, which may attack varieties of previously resistant grain. In 1950 a new race known as 15B destroyed durum wheat crops in North and South Dakota and Minnesota valued at 10 million dollars. Although little loss was experienced in 1951, except in localized areas, rust collections showed this race to be prevalent throughout the Great Plains. Its wide distribution is indicative of a potentially dangerous situation which under favorable weather conditions can result in serious losses to grain crops.

CROPS AFFECTED

Stem rust is a serious pest of wheat, oats, barley and rye.

DAMAGE AND ESTIMATED LOSSES

Stem rust is a constant threat to a 2 billion dollar grain crop. Losses during a single epidemic year have amounted to as much as 200 million bushels of grain. This adversely affects the economy of wide areas of the country. During the period 1918-23 losses averaged about 40 million bushels annually. Recently annual damage has averaged about 15 million bushels. In certain areas in 1950 stem rust losses had a marked effect on the economy of the areas in which the epidemics occurred. When rust wipes out or seriously reduces a crop the impact is felt by all businesses, including transportation, warehousing, milling and financial institutions, and distribution outlets. Losses from stem rust during 1953 were extremely heavy in the parts of the spring wheat area of the upper Mississippi Valley. They were particularly severe in Durham wheats in North Dakota, South Dakota, and Minnesota.

CONTROL PROGRAM

The purpose of the program is to protect small grains from stem rust by eradicating the species of barberry which are the alternate host of the disease.

LEGISLATIVE AUTHORITY

This program is authorized by the Organic Act of 1944, as amended (7 U.S.C. 147a) and the Plant Quarantine Act of 1912, as amended (7 U.S.C. 151-167).

July 7, 1954



